

In the claims:

Please amend claims 1-4 as follows:

1. (currently amended) A colloidal crystal preparation process, ~~wherein compressed air pulses are generated by control of a compressed gas, and then guided to comprising the steps of:~~ forming a gas pulse from a compressed gas by using gas pulse formation means and outputting the formed gas pulse; and applying the gas pulse to a colloidal crystal preparation vessel having a flat plate capillary portion to produce a pressure fluctuation therein, which is used as driving power, thereby giving a flow and hard-stopping motion to a colloidal solution in said flat plate capillary for formation of colloidal crystals of good single crystallinity portion, wherein a colloidal solution filled in the flat plate capillary portion is made to flow at a pressure rise phase and a constant pressure phase of the applied gas pulse, and the flow of the colloidal solution is stopped at a pressure drop phase of the applied gas pulse.

2. (currently amended) A colloidal crystal gel process of preparation of a colloidal crystal gel having good single crystallinity, wherein subsequent to said step of forming colloidal crystals of good single crystallinity as recited in

~~claim 1, a step of gelating the formed colloidal crystals is applied, comprising the steps of:~~

forming a gas pulse from a compressed gas by using gas pulse formation means and outputting the formed gas pulse;

applying the gas pulse to a colloidal crystal preparation vessel having a flat plate capillary portion, wherein a colloidal solution containing high-molecular gelation agent filled in the flat plate capillary portion is made to flow at a pressure rise phase and a constant pressure phase of the applied gas pulse, and the flow of the colloidal solution is stopped at a pressure drop phase of the applied gas pulse; and

gelating the high-molecular gelation agent in the colloidal crystal containing high-molecular gelation agent obtained through the gas pulse applying step.

3. (currently amended) A colloidal crystal preparation system, comprising:

compressed gas feeder means[[],,];

gas pulse formation means for producing a compressed gas as short-time gas pulses, forming a gas pulse from the compressed gas fed by the compressed gas feeder means and outputting the formed gas pulse; and

a colloidal crystal preparation vessel having a flat plate capillary portion for formation of that receives application of the gas pulse to form a colloidal crystals crystal, wherein

the gas pulse formation means forms a gas pulse whose pressure rise phase and constant pressure phase make a colloidal solution to flow and whose pressure drop phase stops the flow of the colloidal solution and outputs the formed gas pulse.

4. (currently amended) A colloidal crystal gel preparation system[[,]] comprising:

compressed gas feeder means[[,]]; gas pulse formation means for producing a compressed gas as short-time a gas pulses, pulse from the compressed gas fed by the compressed gas feeder means and outputting the formed gas pulse;

and
a colloidal crystal preparation vessel having a flat plate capillary portion ~~for formation of colloidal crystals, that receives application of the gas pulse to form a colloidal crystal containing high-molecular gelation agent; and~~

gelation acceleration means, for gelating the high-molecular gelation agent in the colloidal crystal, wherein

the gas pulse formation means forms a gas pulse whose pressure rise phase and constant pressure phase make a colloidal solution to flow and whose pressure drop phase stops the flow of the colloidal solution and outputs the formed gas pulse.